EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	10/521782	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:22
S2	16979	epoxidation or oxidation and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/29 18:47
S3	3004	(epoxidation or oxidation) and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/29 18:48
S4	171	epoxidation and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/29 18:49
S5	106	S4 and (hydroperoxide or "hydrogen peroxide")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/29 18:51
S6	502	S3 and (hydroperoxide or "hydrogen peroxide")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/29 19:12
S7	28	S6 and "feed point"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:01

EAST Search History

S8	3013	(epoxidation or oxidation) and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:01
S9	503	S8 and (hydroperoxide or "hydrogen peroxide")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:01
S10	44	S9 and adiabatic	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:02
S11	616	reactor and "tube reactor" and "fixed-bed"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 13:02
S12	39	S11 and "feed points"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 10:37
S13	122	S11 and vertical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 11:22
S14	2	S8 and ("two feed points" or "dual feed")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 11:30

EAST Search History

S15	12	S8 and ("after-reactor")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 11:33
S16	5	"wo 01/10855"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 11:56
S17	6	"wo 01/72729"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 13:00
S18	1	"wo 02/22259"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 13:00
S19	371	"tube reactor" and ("feed points" or "feed inlets" or "feed ports")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 13:04
S20	9	"4582613"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:18
S21	5	"6410786"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:21

EAST Search History

S22	7	"6563000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:22
S23	7	09/387119	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:23
S24	1	10/387119	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:23
S25	2	"6949675"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:55
S26	425	549/524 or 549/529	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:56
S27	21	S26 and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/30 14:57

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	438	549/531	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:08
L3	0	l2 and reactor and "inlet points" and feed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:09
L4	2	l2 and oxirane and hydroperoxide and catalyst and adiabatic and ((tube or "fixed-bed") near reactor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:09
L5	0	l2 and reactor and "multiple feed points"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10
L6	0	l2 and reactor and "inlet points" and feed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10
L7	28	l2 and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10
L8	8	l2 and (oxirane or "propylene oxide") and (hydroperoxide or "hydrogen peroxide" or hydrogenperoxide) and catalyst and adiabatic and ((tube or "fixed-bed") near reactor) and zeolite and solvent	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:21

EAST Search History

S1	1	10/521782	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:08
S2	13	oxirane and hydroperoxide and catalyst and adiabatic and tube and reactor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 13:58
S3	10	oxirane and hydroperoxide and catalyst and adiabatic and ((tube or "fixed-bed") near reactor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:09
S4	31	(oxirane or "propylene oxide") and (hydroperoxide or "hydrogen peroxide" or hydrogenperoxide) and catalyst and adiabatic and ((tube or "fixed-bed") near reactor) and zeolite and solvent	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:21
S5	2	10/220503	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 14:51
S6	63	reactor and "multiple feed points"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10
S7	1	S6 and epoxidation	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 14:54

EAST Search History

S8	410	reactor and "inlet points" and feed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10
S9	11	S8 and epoxidation	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 14:54
S10	3138	reactor and epoxidation	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 15:11
S11	1053	S10 and hydroperoxide	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 15:11
S12	1000	S11 and catalyst	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 15:12
S13	783	S12 and (propene or propylene)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 15:14
S14	73	S13 and "tube reactor"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 17:10

EAST Search History

S15	13	S14 and adiabatic	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/01 15:16

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     FILE 'CAPLUS' ENTERED AT 17:36:27 ON 01 OCT 2007
L1             0 S (OXIRANE OR "PROPYLENE OXIDE") AND (HYDROPEROXIDE OR "HYDROGE
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L2            0 S (OXIRANE OR "PROPYLENE OXIDE") AND (HYDROPEROXIDE OR "HYDROGE
L3            1 S (OXIRANE OR "PROPYLENE OXIDE") AND (HYDROPEROXIDE OR "HYDROGE
L4         1414 S (OXIRANE OR "PROPYLENE OXIDE") AND (HYDROPEROXIDE OR "HYDROGE
L5            4 S L4 AND CATALYST AND ADIABATIC
L6          103 S L4 AND CATALYST AND REACTOR

     FILE 'CAPLUS' ENTERED AT 17:45:28 ON 01 OCT 2007
L7           20 S L6 AND (TUBE OR "FIXED-BED")
L8            1 S L7 AND SOLVENT AND ZEOLITE

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FULL ESTIMATED COST                                       0.47     183.67

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L7 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Gas-propylene was epoxidized with dilute methanol solns. of hydrogen peroxide in a fixed-bed reactor using self-made titanium-containing mol. sieve of ZSM-5 type (Model TS-1) as catalyst. The technol. conditions such as the liquid space-velocity, mole ratio of propylene to hydrogen peroxide, temperature and contents of hydrogen peroxide in methanol solns., which would determine the epoxidn. rate, were studied systematically. The exptl. results show that when the reaction pressure is 0.7 MPa, reaction temperature is 50 °C, mass content of hydrogen peroxide in methanol solns. is about 1.5%, liquid mass space velocity is 48 h-1, the conversion of hydrogen peroxide and selectivity of propylene oxide are more than 90% and 85%, resp.

ACCESSION NUMBER: 2007:1065469 CAPLUS
TITLE: Epoxidation of propylene and hydrogen peroxide in a lower pressure continuous fixed-bed reactor
AUTHOR(S): Zhao, Ji-gang; Shen, Ben-xian; Xiao, Wei-guo; Zhang, Ce; Wang, Lei
CORPORATE SOURCE: School of Chemical Engineering, East China University of Science and Technology, Shanghai, 200237, Peop. Rep. China
SOURCE: Huadong Ligong Daxue Xuebao, Ziran Kexueban (2007), 33(1), 23-27
CODEN: HLIXEV; ISSN: 1006-3080
PUBLISHER: Huadong Ligong Daxue Xuebao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

L7 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB A process for the epoxidn. of olefins with hydrogen peroxide is claimed. This process serves to increase product yield by minimizing loss of olefin conversion rate and inhibit production of byproducts while using a catalyst formed by a conventional method. Said method serves to improve the inactivation degree of the catalyst in a continuous reaction. The epoxidn. of alkenes is performed by a reaction with hydrogen peroxide in the presence of titanium silicalite catalyst (formed by using alumina as a binder or a supporter) with olefin in a fixed bed reactor using an alc.-nitrile mixed solvent. The titanium silicalite catalyst formed is a crystalline titanium-containing zeolite having the MFI or MEL structure represented by the formula xTiO2(1-x)SiO2 (x = 0.01-0.05). The titanium silicalite catalyst formed is a mixture of titanium silicalite and 5-95 weight% of the alumina binder or support. The nitrile is acetonitrile, propanenitrile or pentanenitrile and the alc. is methanol, ethanol, isopropanol, tert-butanol, cyclohexanol. The amount of hydrogen peroxide is 1-90 weight%. The olefin is a C2-10-aliphatic olefin. The epoxidn. is performed at 0-100° under 1-100 atm pressure and the mass-space velocity is 0.05-1 h-1. More narrow definitions are indicated; however, specific chemical structures and/or addnl. information are not provided here.

ACCESSION NUMBER: 2006:1141411 CAPLUS
DOCUMENT NUMBER: 146:295762
TITLE: Process for epoxidation of olefin with hydrogen peroxide and titanium silicalite catalyst
INVENTOR(S): Kwak, Byong Sung; Oh, Seung Hoon; Lee, Jae Ho; Choi, Hyun Chul; Kim, Tae Jin; Lee, Jong Hyung; Choo, Dae Hyun
PATENT ASSIGNEE(S): Sk Corporation, S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2006055409	A	20060523	KR 2005-110355	20051117
PRIORITY APPLN. INFO.:			KR 2004-94678	A 20041118

L7 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Hydrogen and oxygen react in a plasma generating apparatus of medium barrier discharging at ambient temperature and atmospheric to give hydrogen peroxide, which is gathered with methanol and used directly in the epoxidn. of propylene. The plasma generation apparatus is a coaxial sleeved glass structure and the circulation cooling water in the annular space of the sleeve also acts as an earth electrode. The epoxidn. of propylene is carried out in batch or fixed bed reactor with titanium-containing zeolite as the catalyst.

ACCESSION NUMBER: 2005:561506 CAPLUS
DOCUMENT NUMBER: 143:153876
TITLE: Method and device for epoxidation of propylene using plasma of hydrogen and oxygen
INVENTOR(S): Guo, Hongchen
PATENT ASSIGNEE(S): Dalian University of Technology, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1546479	A	20041117	CN 2003-10105211	20031128
PRIORITY APPLN. INFO.:			CN 2003-10105211	20031128

L7 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Epoxidn. of propylene to propylene oxide over Ag/TS-1 in the presence of oxygen and hydrogen was carried out in a fixed-bed, quartz flow reactor. The effects of Ag loading, support, Si/Ti mol. ratio of TS-1 and calcination temperature of Ag/TS-1 on the propylene epoxidn. were investigated. The results show that Ag loading, support and the calcination temperature of Ag/TS-1 as well as the Si/Ti mol. ratio of TS-1 have a great effect on the catalytic properties. The optimum Ag loading, calcination temperature of Ag/TS-1 and Si/Ti mol. ratio of TS-1 are 2 weight%, 450°C and 64, resp. Over 2.0 weight% Ag/TS-1 (nSi/nTi=64) catalyst, at a space velocity of 3000h-1, 0.92% propylene conversion with 91.2% selectivity to propylene oxide is obtained at 150°C. The deactivation of Ag/TS-1 catalyst is not due to the changes of active species, but the coke of the catalyst, which can be easily regenerated by calcination at 450°C in air.

ACCESSION NUMBER: 2005:418395 CAPLUS
DOCUMENT NUMBER: 144:150677
TITLE: Propylene epoxidation over Ag/TS-1 catalysts
AUTHOR(S): Wang, R.; Hao, J.; Guo, X.; Wang, X.; Liu, X.
CORPORATE SOURCE: State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SOURCE: Studies in Surface Science and Catalysis (2004), 154C(Recent Advances in the Science and Technology of Zeolites and Related Materials), 2632-2638
CODEN: SSCTDM; ISSN: 0167-2991
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Synthesis of propylene oxide through gas phase epoxidn. of propylene using mol. oxygen as an oxidant over lab-prepared Ag/TS-1 catalyst and the lab fixed-bed reaction unit with quartz reactor was studied. The preparation conditions of Ag/TS-1 catalyst such as, Ag loading, type of support, the Si/Ti mol ratio of TS-1, calcination conditions, etc. were investigated. The effects of reaction conditions including reaction temperature, gas velocity, volume ratio of C3H6/O2 and C3H6/H2 on catalyst performance were also investigated. The optimum Ag loading w(Ag) was of 2% (mass percent) and n(Si)/n(Ti) was of 64 (support), and the optimum calcination temperature was 450°C in air for Ag/TS-1 catalyst. The reaction when carried out at 150°C by passing the reactant mixture of C3H6, O2, H2 and N2 through the reactor at a volume ratio of 1:2:3:12 with a space velocity of 4000 h-1 is optimum. After 70 min reaction, propylene conversion (x(C3H6)) and selectivity to propylene oxide (SPO) were 1.37% and 93.51%, resp.

ACCESSION NUMBER: 2004:752970 CAPLUS
DOCUMENT NUMBER: 142:156346
TITLE: Propylene oxidation to propylene oxide over Ag/TS-1 catalyst in the gas phase
AUTHOR(S): Wang, Rui-pu; Hao, Jing-quan; Guo, Xin-wen; Wang, Xiang-sheng; Liu, Xue-wu
CORPORATE SOURCE: State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SOURCE: Shiyou Xuebao, Shiyou Jiagong (2004), 20(4), 44-50
CODEN: SXSHEY; ISSN: 1001-8719
PUBLISHER: Shiyou Xuebao, Shiyou Jiagong Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

L7 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB The deactivation and regeneration of the lamina titanium silicalite (TS-1) catalyst for the epoxidn. of propylene with dilute H2O2 was investigated in a fixed-bed reactor. In the scale-up experiment, the dosage of the lamina TS-1 catalyst is 2.5 kg, after 1000 h reaction the catalyst still exhibits good performance and further increases the reaction time, the conversion of H2O2 begins to decrease. TG and BET analyses of the deactivated catalysts show that the main species occluded within the zeolite pore are propylene oxide oligomers, and these species occupying the active Ti site and blocking the pores of the lamina TS-1 are the main reason for the deactivation of catalyst. The deactivated catalyst can be regenerated by different regeneration methods. The activity of deactivated catalysts regenerated by dilute H2O2 or heat treatment by using air or nitrogen as a calcination media can be fully recovered, but a decline in propylene oxide (PO) selectivity of the regenerated catalyst has been observed during the first hours of reaction. However, water vapor treatment of the deactivated catalyst can improve the PO selectivity with the same activity as that of the fresh lamina TS-1 catalyst.

ACCESSION NUMBER: 2004:679409 CAPLUS
DOCUMENT NUMBER: 141:351728
TITLE: Regeneration of Lamina TS-1 Catalyst in the Epoxidation of Propylene with Hydrogen Peroxide
AUTHOR(S): Liu, Xuewu; Wang, Xiangsheng; Guo, Xinwen; Li, Gang; Yan, Haisheng
CORPORATE SOURCE: State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SOURCE: Catalysis Letters (2004), 97(3-4), 223-229
CODEN: CALEER; ISSN: 1011-372X
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:351728
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB The TS-1 powder, which is synthesized using tetrapropylammonium bromide (TPABr) as template, was molded into catalyst by extruding. The prepared catalysts containing 30%, 50%, 60% or 80% TS-1 were used to catalyze the propylene epoxidn. to produce PO in a fixed bed reactor. The results show that TS-1 is the active site of the catalyst. The catalyst with 80% TS-1 has the highest activity and mech. intensity. The selectivity of PO decreases and the utilization of hydrogen peroxide increases as TS-1 content increases in the catalyst. Both the selectivity of PO and the utilization of hydrogen peroxide increase as the WHSV of propylene increases from 0.30 h-1 to 0.70 h-1. The catalyst containing 80% TS-1 exhibits 97.8% hydrogen peroxide conversion, 86.4% PO selectivity and 91.8% hydrogen peroxide utilization when the WHSV of propylene is 0.70 h-1.

ACCESSION NUMBER: 2004:369388 CAPLUS
DOCUMENT NUMBER: 141:157499
TITLE: Properties of titanium silicalite catalyst with different TS-1 contents
AUTHOR(S): Song, Gang; Li, Gang; Guo, Xin-wen; Wang, Xiang-sheng; Chen, Yong-ying
CORPORATE SOURCE: Department of Catalytical Chemistry and Engineering, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SOURCE: Ranliao Huaxue Xuebao (2004), 32(1), 113-116
CODEN: RHXUD8; ISSN: 0253-2409
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

L7 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB The present invention relates to a process for the epoxidn. of ≥1 organic compound with an oxygen-delivering substance, for example a hydroperoxide, in the presence of ≥1 catalyst containing a metal-organic framework material comprising pores and a metal ion and ≥1 bidentate organic compound, said bidentate organic compound being coordinately bound to the metal ion. Thus, a 66:24:10 volume ratio of O2, He, and propylene was streamed through a tube reactor containing AgNO3-treated MOF-5 at 220° to give propylene oxide with a turnover of 3.3% and selectivity of 10.3% after 15 h.

ACCESSION NUMBER: 2003:747904 CAPLUS
DOCUMENT NUMBER: 139:278233
TITLE: Process for epoxidation of organic compounds with oxygen or oxygen-delivering compounds using catalysts containing metal-organic framework (MOF) materials
INVENTOR(S): Mueller, Ulrich; Lobree, Lisa; Hesse, Michael; Yaghi, Omar M.; Eddaoudi, Mohamed
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany; The Regents of the University of Michigan
SOURCE: U.S., 13 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6624318	B1	20030923	US 2002-157494	20020530
WO 2003101975	A1	20031211	WO 2003-EP5547	20030527
W: US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1513823	A1	20050316	EP 2003-730125	20030527
EP 1513823	B1	20070808		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
AT 369350	T	20070815	AT 2003-730125	20030527
PRIORITY APPLN. INFO.:			US 2002-157494 A	20020530
			WO 2003-EP5547 W	20030527

OTHER SOURCE(S): CASREACT 139:278233
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB A process for the production of an epoxide (e.g., methyloxirane) by reaction of an olefin (e.g., propylene) with a hydroperoxide (e.g., benzene hydroperoxide) in the presence of a solid epoxidn. catalyst is described where the olefin and hydroperoxide reactants are first reacted in it least two fixed-bed reactors packed with fresh catalyst, olefin being fed serially to the reactors and hydroperoxide reactant being fed in parallel to the reactors and then the reactor effluent from the last of the reactors is passed to as least one further fixed-bed reactor packed with epoxidn. catalyst which has been at least partially deactivated. A process flow diagram is presented.

ACCESSION NUMBER: 2003:485738 CAPLUS
DOCUMENT NUMBER: 139:53455
TITLE: Epoxidation system with fixed-bed reactors for the manufacture of epoxides from alkenes and hydroperoxides
INVENTOR(S): Leyshon, David W.; Jubin, John C., Jr.; Wolff, Richard J.
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6583300	B1	20030624	US 2002-273308	20021017
CA 2502509	A1	20040429	CA 2003-2502509	20030827
WO 2004035559	A1	20040429	WO 2003-US27158	20030827
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003260134	A1	20040504	AU 2003-260134	20030827
EP 1551819	A1	20050713	EP 2003-808963	20030827
EP 1551819	B1	20060301		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015277	A	20050830	BR 2003-15277	20030827
CN 1688562	A	20051026	CN 2003-824268	20030827
AT 318802	T	20060315	AT 2003-808963	20030827
JP 2006513155	T	20060420	JP 2004-545255	20030827
ES 2254987	T3	20060616	ES 2003-3808963	20030827

PRIORITY APPLN. INFO.: US 2002-273308 A 20021017
WO 2003-US27158 W 20030827

OTHER SOURCE(S): MARPAT 139:53455
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS FORMAT

L7 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE

L7 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Titanium silicalite (TS-1) was successfully synthesized by using Pr4NBr (TPABr) and BuNH2 as the template and the base, resp. XRD, IR, SEM, 13C CP/MAS NMR, UV-visible, and UV-Raman techniques were used to characterize the synthesized products. The results show that TS-1 has MFI structure with high crystallinity and large crystal size, and with two kinds of titanium species. Using epoxidn. of propylene as the probe, the catalytic properties of TS-1 in the present work were investigated. The crystal size of TS-1 greatly affects the initial reaction rate of propylene oxide (PO) formation. The effects of reaction conditions on PO reveal that the PO formation is greatly influenced by the solvent and the solution pH value. Methanol is the most preferable solvent, and a portion of water (<30%) in solution does not have much impact on the reaction. Moreover, the addition of base used to neutralize the residual acidity of the catalyst favor the reaction, the catalyst shows high activity and selectivity upon the adequate amount of base and the catalyst can be used repeatedly without regeneration. In the fixed-bed reactor, using ammonia water as the neutralizer, after 200 h of reaction, both the conversion and the utilization of H2O2 is about 95%, the selectivity of PO is about 90%.

ACCESSION NUMBER: 2002:403022 CAPLUS
DOCUMENT NUMBER: 137:232944
TITLE: Synthesis of titanium silicalite (TS-1) from the TPABr system and its catalytic properties for epoxidation of propylene
AUTHOR(S): Wang, Xiang-sheng; Guo, Xin-wen; Li, Gang
CORPORATE SOURCE: State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SOURCE: Catalysis Today (2002), 74(1-2), 65-75
CODEN: CATTEA; ISSN: 0920-5861
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS FORMAT
RECORD. ALL CITATIONS AVAILABLE IN THE RE

L7 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Propylene oxide is manufactured in a three-stage process from propylene, oxygen, and hydrogen. The first reaction step is the oxidation of isopropanol/water with mol. oxygen in a reaction-distillation column (approx. 500 psi and 350° F.), to produce hydrogen peroxide and acetone. The column is configured with an upper high liquid holdup reaction zone and a lower short residence time stripping zone. Inert gas circulating through the column effects separation of the hydrogen peroxide as part of the bottoms fraction and acetone as part of the distillate fraction. The liquid part of the distillate fraction comprising acetone, isopropanol and water is then reacted with hydrogen (second reaction step) under reactive-distillation conditions to convert the contained acetone back to isopropanol for subsequent recycle to the first reaction step. The third reaction step is the epoxidn. of propylene (in stoichiometric excess) with the hydrogen peroxide solution, typically in the presence of a titanium silicalite catalyst. The reaction is performed in a series of fixed bed adiabatic reactors with intercooling. Product separation is by conventional distillation Unreacted propylene is recycled to the epoxidn. step and water/isopropanol to the first reaction step.

ACCESSION NUMBER: 2002:23864 CAPLUS
DOCUMENT NUMBER: 136:70254
TITLE: Three-stage process for manufacturing of propylene oxide
INVENTOR(S): Gelbein, Abraham P.
PATENT ASSIGNEE(S): Chemical Research & Licensing Company, USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6337412	B1	20020108	US 2001-841427	20010424
WO 2002085876	A1	20021031	WO 2001-US49838	20011228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002245164	A1	20021105	AU 2002-245164	20011228

PRIORITY APPLN. INFO.: US 2000-199564P P 20000425
US 2001-841427 A 20010424
WO 2001-US49838 W 20011228

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS FORMAT
RECORD. ALL CITATIONS AVAILABLE IN THE RE

L7 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L7 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB The title process comprises passing a feed containing an organic hydroperoxide, e.g., ethylbenzene hydroperoxide, and alkene, e.g., propene, through a bank of ≥2 serially connected reactors all containing a bed of heterogeneous epoxidn. catalyst particles, e.g., com. titania/alumina, and operated in a cyclic mode. The 1st reactor of the cyclically operated bank is put in a position further down this bank, when the activity of the epoxidn. catalyst contained in the reactor decreased to an undesirably low level. In this position the catalyst with decreased activity is contacted with the effluent from the reactor in the preceding position at a temperature which is ≥5° higher than the final temperature at which the catalyst was in use in the 1st position of the bank and for sufficient time to restore its activity to the desired level. The bank of cyclically operated epoxidn. reactors may be followed by ≥1 addnl. fixed-bed epoxidn. reactors which are not operated cyclically.

ACCESSION NUMBER: 2001:137204 CAPLUS
DOCUMENT NUMBER: 134:194867
TITLE: Process for preparing alkylene oxides
INVENTOR(S): Derks, Willem; Dirkzwager, Hendrik; Van der Veen, Alexander Jan; Wermeling, Rutger Johannes Franciscus
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij BV, Neth.
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001012617	A1	20010222	WO 2000-EP8052	20000816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6365761	B1	20020402	US 2000-590549	20000608
BR 2000013358	A	20020430	BR 2000-13358	20000816
EP 1204653	A1	20020515	EP 2000-954638	20000816
EP 1204653	B1	20030129		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003507374	T	20030225	JP 2001-517515	20000816
AU 757612	B2	20030227	AU 2000-67024	20000816
ES 2186655	T3	20030516	ES 2000-954638	20000816
CN 1135225	B	20040121	CN 2000-811661	20000816
RU 2241706	C2	20041210	RU 2002-106823	20000816
PRIORITY APPLN. INFO.:			EP 1999-202670 A	19990818
			WO 2000-EP8052 W	20000816

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L7 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L7 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Propylene epoxidn. over a Pd-Pt/TS-1 [Ti silicalite] catalyst with in situ formed hydrogen peroxide was carried out in a fixed bed reactor under high pressure. The continuous operation allowed the study of catalyst deactivation and changes in product distribution with time-onstream. The initial propylene oxide selectivity was high, 99% at 3.5% conversion, but the catalyst deactivated rapidly with time-onstream and successively the formation of Me formate became the prevalent reaction. Using carbon dioxide, instead of nitrogen, had a beneficial effect on the formation of propylene oxide, and even higher yields were obtained when increasing the pressure from 50 to 120 bar (supercrit. fluid phase). Thermal anal. (TA-MS and TA-FTIR) indicated that catalyst regeneration requires oxidation at elevated temperature; washing with an organic solvent is less efficient. The serious catalyst deactivation and the striking shift in the selectivity pattern of the catalyst is traced to competing alc. oxidation on platinum metal.

ACCESSION NUMBER: 2001:92193 CAPLUS
DOCUMENT NUMBER: 134:312764
TITLE: Continuous epoxidation of propylene with oxygen and hydrogen on a Pd-Pt/TS-1 catalyst
AUTHOR(S): Jenzer, Gregor; Mallat, Tamas; Maciejewski, Marek; Eigenmann, Florian; Baiker, Alfons
CORPORATE SOURCE: Laboratory of Technical Chemistry, Swiss Federal Institute of Technology, ETH-Zentrum, Zurich, CH-8092, Switz.
SOURCE: Applied Catalysis, A: General (2001), 208(1,2), 125-133
CODEN: ACAGE4; ISSN: 0926-860X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L7 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB A closed system comprises a shell and tube reactor and a shell and tube cooler placed side-by-side, a reversed U-tube connecting the top of the reactor and cooler, a U-tube connecting the bottom of the reactor and cooler, a gas-liquid separator on the top of the reactor and connecting to the reversed U-tube. Finely granular Ti-Si mol. sieves (TS 1) were used as catalysts. The conversion of H2O2 and the selectivity (vs. H2O2) of propylene oxide were >90%.

ACCESSION NUMBER: 2001:55341 CAPLUS
DOCUMENT NUMBER: 134:86625
TITLE: Apparatus and processes for epoxidizing propylene with hydrogen peroxide solutions
INVENTOR(S): Xu, Xi'en; Chen, Xiaohui; Li, Shijun
PATENT ASSIGNEE(S): China Petrochemical Group Corp., Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1256273	A	20000614	CN 1998-123136	19981209
PRIORITY APPLN. INFO.:			CN 1998-123136	19981209

L7 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB A method for reacting an organic compound with a hydroperoxide comprises ≥1 of steps 1-3: (1) reacting the hydroperoxide with the organic compound to obtain a mixture composed of a reacted organic compound and unreacted hydroperoxide; (2) separating the unreacted hydroperoxide from the mixture from step (1); (3) reacting the hydroperoxide separated in step (2) with the organic compound Thus, a tube reactor packed with strands of TS-1 was charged with 40 weight% H2O2, MeOH, and propene at 40° and 20 bar to give 98.4% H2O2 conversion and 80.3% propene oxide selectivity.

ACCESSION NUMBER: 2000:117006 CAPLUS
DOCUMENT NUMBER: 132:151672
TITLE: Method for reacting an organic compound with a hydroperoxide
INVENTOR(S): Bassler, Peter; Harder, Wolfgang; Resch, Peter; Rieber, Norbert; Ruppel, Wilhelm; Teles, Joaquim Henrique; Walch, Andreas; Wenzel, Anne; Zehner, Peter
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000007965	A1	20000217	WO 1999-EP5740	19990809
W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HR, HU, ID, IL, IN, JP, KR, KZ, LT, LV, MK, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, ZA, AM, AZ, KG, MD, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19835907	A1	20000217	DE 1998-19835907	19980807
CA 2339710	A1	20000217	CA 1999-2339710	19990809
AU 9956199	A	20000228	AU 1999-56199	19990809
EP 1102733	A1	20010530	EP 1999-942819	19990809
EP 1102733	B1	20040407		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002522402	T	20020723	JP 2000-563600	19990809
AT 263744	T	20040415	AT 1999-942819	19990809
ES 2220106	T3	20041201	ES 1999-942819	19990809
MX 2001PA01248	A	20011031	MX 2001-PA1248	20010201
ZA 2001001003	A	20020206	ZA 2001-1003	20010206
IN 2001CN00173	A	20061006	IN 2001-CN173	20010206
US 6479680	B1	20021112	US 2001-762290	20010207
PRIORITY APPLN. INFO.:			DE 1998-19835907 A	19980807
			WO 1999-EP5740 W	19990809

OTHER SOURCE(S): CASREACT 132:151672
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB An olefin epoxidn. process is operated using a plurality of reactor vessels, each containing a fixed bed of a heterogeneous catalyst such as titania-on-silica. The reactor vessels are connected in series whereby a feedstream comprised of olefin and an active oxygen species is passed through the series of reactor vessels in contact with the heterogeneous catalyst to accomplish conversion of the olefin to the corresponding epoxide. As the activity of the catalyst in an individual reactor vessel falls to an undesirably low level, the reactor vessel is taken out of service and a replacement reactor vessel containing fresh or regenerated catalyst introduced. The replacement reactor vessel may, in alternative embodiments of the process, be the first or the last reactor vessel in the series. For example, the feedstream may first be contacted with either the most active or the least active charge of catalyst within the series of reactor vessels. Although the latter embodiment permits somewhat longer catalyst life, the former embodiment requires much smaller capacity heat exchangers. The process considerably reduces catalyst usage as compared to a conventional fixed bed epoxidn. process where all of the catalyst is replaced or regenerated at the same time.

ACCESSION NUMBER: 1999:3312 CAPLUS
DOCUMENT NUMBER: 130:66885
TITLE: Epoxidation process using serially connected cascade of fixed bed reactors
INVENTOR(S): Jubin, John C., Jr.; Danner, Jeffrey B.
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5849937	A	19981215	US 1997-995239	19971219
CA 2310427	A1	19990701	CA 1998-2310427	19980923
WO 9932472	A1	19990701	WO 1998-EP6059	19980923
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9910260	A	19990712	AU 1999-10260	19980923
EP 1047681	A1	20001102	EP 1998-952631	19980923
EP 1047681	B1	20031210		
R: BE, DE, ES, FR, GB, IT, NL				
BR 9813834	A	20001121	BR 1998-13834	19980923
JP 2001526280	T	20011218	JP 2000-525409	19980923
RU 2205181	C2	20030527	RU 2000-115957	19980923
MX 2000PA05986	A	20010123	MX 2000-PA5986	20000616
PRIORITY APPLN. INFO.:			US 1997-995239 A	19971219
			WO 1998-EP6059 W	19980923

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS

L7 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB The catalytic activity of a titanium-containing heterogeneous catalyst such as titania-on-silica which has been used to catalyze olefin epoxidn. is effectively restored by washing the catalyst with water, alc., ether, nitrile, ester, aromatic hydrocarbon, or ketone. Thus, a non-silylated titania-on-silica catalyst was prepared in accordance with the procedures described in U.S. patent number 3,923,843 and used to catalyze the epoxidn. of propylene with ethylbenzene hydroperoxide in a fixed bed reactor for 526 h. After removal from the reactor, the used catalyst gave only 23% conversion and 90% selectivity to epoxide in a batch epoxidn. of 1-octene with ethylbenzene hydroperoxide (1 h, 90°). A portion of the deactivated catalyst was washed with various solvents, dried in a 120° vacuum oven, and tested in batch epoxidn. of 1-octene using ethylbenzene hydroperoxide to give 62% conversion and 86% epoxide selectivity after washing with α-methylbenzyl alc. and 66% conversion and 86% epoxide selectivity after washing with deionized water.

ACCESSION NUMBER: 1998:479458 CAPLUS
DOCUMENT NUMBER: 129:110418
TITLE: Regeneration of heterogeneous catalyst for olefin epoxidation
INVENTOR(S): Carroll, Kevin M.; Morales, Edrick; Han, Yuan-zhang
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA; Arco Chemie Technologie Nederland B.V.
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9828072	A1	19980702	WO 1997-EP6625	19971127
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5916835	A	19990629	US 1996-770821	19961220
CA 2275264	A1	19980702	CA 1997-2275264	19971127
CA 2275264	C	20050614		
AU 9855570	A	19980717	AU 1998-55570	19971127
EP 948403	A1	19991013	EP 1997-951993	19971127
EP 948403	B1	20050209		
R: BE, DE, ES, FR, GB, IT, NL				
BR 9713751	A	20000201	BR 1997-13751	19971127
CN 1246075	A	20000301	CN 1997-181768	19971127
JP 2001513694	T	20010904	JP 1998-528289	19971127
KR 2000057610	A	20000925	KR 1999-705397	19990616
PRIORITY APPLN. INFO.:			US 1996-770821 A	19961220
			WO 1997-EP6625 W	19971127

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L7 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Propylene oxide (I) is manufactured by epoxidn. of propylene by using ethylbenzene hydroperoxide (II) ethylbenzene (III) solution, which is prepared by liquid phase autoxidn. of III. The epoxidn. process is as follows; (1) alkali washing 10-25% II solution in III to give an oil, (2) distilling of the oil to give condensed II solution, (3) epoxidizing of propylene (IV) by the II solution in the presence of Ti-containing catalysts to give I associated with III, 1-phenylethanol, etc., (4) removing IV by evaporation, and (5) evaporating the residual reaction solution after addition of 0.1-100% (based on I) C2-4 alcs., C2-8 ethers, C3-9 ketones, C2-3 nitriles, and/or C6-7 hydrocarbons for separation of I-rich components obtained from the top and other components on the bottom. Thus, washing 3000 g II solution in III by aqueous NaOH, evapog. the solution in vacuo, epoxidizing IV by the concentrated solution in the presence of Ti/SiO2 in fixed-bed reactor, removing IV, adding 0.05% PrOH, and evaporating gave I at selectivity 92% and loss of I ≤0.01%.

ACCESSION NUMBER: 1998:108130 CAPLUS
DOCUMENT NUMBER: 128:167815
TITLE: Manufacture of propylene oxide with reduced loss of the product
INVENTOR(S): Yoshii, Masayuki; Oku, Noriaki; Ishino, Masaru
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10045737	A	19980217	JP 1996-210085	19960808
PRIORITY APPLN. INFO.:			JP 1996-210085	19960808

L7 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB A process is described for conducting an exothermic reaction between ≥2 reactants in a fixed-bed catalytic reactor under isothermal conditions. The reaction mixture includes ≥1 compound having a lower b.p. than the other compds. present, the quantity present being sufficient to consume, by vaporization, the heat generated by the exothermic reaction. The reactor is operated at the boiling pressure of the reaction mixture and facilitates a cocurrent downflow of the liquid and the gas phases, the gas phase comprising the vaporized component having the lowest b.p. Thus, the process was used for preparation of propylene oxide by catalytic oxidation of propene with ethylbenzene hydroperoxide using a Ti catalyst.

ACCESSION NUMBER: 1989:517684 CAPLUS
DOCUMENT NUMBER: 111:117684
TITLE: Exothermic reaction process in a fixed-bed catalytic reactor
INVENTOR(S): Terlouw, Teunis; Van Os, George; Bakker, Anke Gezina
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 323663	A2	19890712	EP 1988-202871	19881213
EP 323663	A3	19890816		
EP 323663	B1	19920408		
EP 323663	B2	19940914		
R: BE, DE, ES, FR, GB, IT, NL				
CA 1328273	C	19940405	CA 1988-584147	19881125
ES 2030499	T3	19921101	ES 1988-202871	19881213
AU 8826901	A	19890622	AU 1988-26901	19881215
AU 612741	B2	19910718		
CN 1033752	A	19890712	CN 1988-108588	19881215
CN 1013552	B	19910821		
JP 01203035	A	19890815	JP 1988-315241	19881215
BR 8806626	A	19890822	BR 1988-6626	19881215
ZA 8809400	A	19900829	ZA 1988-9400	19881215
PRIORITY APPLN. INFO.:			GB 1987-29555 A	19871218

L7 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AB Alkenes; e.g. propene (I); were epoxidized in the liquid phase by means of

an organic hydroperoxide, e.g., cumene hydroperoxide (II), ethylbenzene hydroperoxide (III), or tertbutyl hydroperoxide (IV), introduced at several points of the reaction zone or in several fractions, and in the presence of Mo or V catalysts, using tert-BuOH as solvent. This process may be carried out continuously in a tubular reactor or discontinuously in a vessel provided with a stirrer. Thus, 1500 g./hr. I was treated continuously at 90° with 480 g./hr. II, 480 g./hr. tert-BuOH and 16 g./hr. Mo naphthenate containing 5% Mo (V), in a stainless steel tube (1.5 m. long, internal diam 25-13 mm). Addnl. II was introduced at 2 points in the reaction zone at the rates of 520 and 529 g./hr. The hydroperoxide conversion was of 78.8% with a selectivity of 72.6% in propylene oxide (basis II), 96% II being recovered as cumyl alcohol. The following results were obtained by operating discontinuously 1 hr. at 90° with 0.16 part V (parts I, parts II, parts tert-BuOH, moles I-II consumed, % II converted, % epoxide selectivity, and % alcohol recovery given): 5, 5, 16.9, 13.6, 94.0, 35.4, 97.0; 4.7, 4.7, 15.9, 6.4, 87.2, 81.6, 97.0; 7.0, 3.0, 15.1, 7.8, 86.2, 14.4, 81.0; 5.0, 10, 8.7, 2.1, 75.8, 62.3, 94. 1-Hexene (126 g.), 30 g. IV, 45 g. V, and 1.0 g. VI was heated at 110° in a discontinuous system, 5 g. IV added at 10-min. intervals up to an addnl. amount of 60 g.

IV, and after 180 min. the mixture was distilled The hydroperoxide conversion was 74% with a selectivity of 97% in epoxide (basis peroxide). Cyclohexene epoxide (VI) was also obtained in a discontinuous system by treating cyclohexene with III in the presence of V naphthenate, at 94 or 97% conversion with a selectivity in VII (basis III) of 96 or 87% after 30

or 60 min., resp.

ACCESSION NUMBER: 1966:412198 CAPLUS
DOCUMENT NUMBER: 65:12198
ORIGINAL REFERENCE NO.: 65:2222a-d
TITLE: Epoxidation of alkenes
PATENT ASSIGNEE(S): Halcon International, Inc.
SOURCE: 13 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6507189		19651216	NL 1965-7189	19650604
BE 665240			BE	
PRIORITY APPLN. INFO.:			US	19640615

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=> log hold
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    57.07     240.74

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                   -15.60     -31.98

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 17:59:41 ON 01 OCT 2007
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